2.17 Plant Species

Focused botanical surveys of the BSA for the proposed project and the immediately surrounding areas were conducted by qualified biologists on April 9 and 16, 2010, and June 3, 2010. The results of the surveys are detailed in the NES (September 2010) and Supplemental NES (December 28, 2011) and are summarized in this section.

2.17.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) <u>have</u> regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.19 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG species of special concern, USFWS candidate species, and non-listed California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

2.17.2 Affected Environment

The BSA supports habitat suitable for a variety of special-status plant species. The BSA contains important biological resources in or adjacent to an urban environment. Based on the literature review, it was determined that a total of 48 special-status plant species have the potential to occur in or in the vicinity of the BSA. Eight of these special-status plant species are federally and/or State-listed endangered, threatened, or candidate species and are discussed further in Section 2.19, Threatened and

Endangered Species. The remaining special-status species identified in the literature review are considered special-status by CDFG, USFWS, local agencies, and/or special-interest groups (e.g., California Native Plant Society [CNPS]). Although not federally or State-listed, these species are perceived as having declining populations or local populations that are sparse, rapidly dwindling, or otherwise unstable. Further information on these species, including their status, habitat requirements, and potential for occurrence, is summarized in Table 2.17-1 and discussed further below.

2.17.2.1 Special-Status Coastal Sage Scrub Plant Species

Special-status species with the potential to occur in CSS habitat in the BSA are Coulter's saltbush (CNPS List 1B), south coast saltscale (CNPS List 1B), intermediate mariposa lily (CNPS List 1B), long-spined spineflower (CNPS List 1B), Blochman's dudleya (CNPS List 1B), many-stemmed dudleya (CNPS List 1B), sticky dudleya (CNPS List 1B), Pendleton button-celery (CNPS List 1B), cliff spurge (CNPS List 2), Palmer's grapplinghook (CNPS List 4), vernal barley (CNPS List 3), California satintail (CNPS List 2), Nuttall's lotus (CNPS List 1B), Santa Catalina Island desert-thorn (CNPS List 1B), prostrate vernal pool navarretia (CNPS List 1B), peninsular nolina (CNPS List 1B), Allen's pentachaeta (CNPS List 1B), white rabbit-tobacco (CNPS List 2), Nuttall's scrub oak (CNPS List 1B), San Miguel savory (CNPS List 1B), chaparral ragwort (CNPS List 2), salt spring checkerbloom (CNPS List 2), and Parry's tetracoccus (CNPS List 1B).

There is suitable habitat in the BSA that could support these species; however, much of this habitat is disturbed, developed, or degraded by nonnative species. In addition, none of these species were found in the BSA during the botanical surveys conducted during the appropriate blooming periods in 2010. Therefore, these species are considered absent from the BSA.

2.17.2.2 Special-Status Riparian/Riverine Plant Species

Special-status species with the potential to occur in riparian/riverine habitats in the BSA are Orcutt's brodiaea (CNPS List 1B), southern tarplant (CNPS List 1B), smooth tarplant (CNPS List 1B), long-spined spineflower (CNPS List 1B), Pendleton button-celery (CNPS List 1B), vernal barley (CNPS List 3), California satintail (CNPS List 2), Coulter's goldfields (CNPS List 1B), little mousetail (CNPS List 3), prostrate vernal pool navarretia (CNPS List 1B), white rabbit-tobacco (CNPS List 2), San Miguel savory (CNPS List 1B), and salt spring checkerbloom (CNPS List 2). Suitable habitat for these species is present but limited within the BSA. Botanical surveys conducted in the BSA in 2010 during the appropriate blooming periods for

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Aphanisma	Aphanisma blitoides	CSP CNPS: List 1B	Annual herb. Occurs in coastal bluff scrub, coastal dunes, and coastal scrub in sandy or clay soils up to 915 ft in elevation.	March-June	А	No suitable habitat for this species is present in the BSA.
Rainbow manzanita	Arctostaphylos rainbowensis	CSP CNPS: List 1B	Perennial evergreen shrub. Occurs in chaparral from 675 to 2,010 ft in elevation.	December- March	A	No suitable habitat for this species is present in the BSA.
Coulter's saltbush	Atriplex coulteri	CSP CNPS: List 1B	Perennial herb. Occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands, usually on ocean bluffs and ridge tops in alkaline or clay soils. From 10 to 1,510 ft in elevation.	March- October	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
South coast saltscale	Atriplex pacifica	CSP CNPS: List 1B	Annual herb. Occurs in costal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands in alkaline or clay soils. From 9 to 1,380 ft in elevation.	March- October	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Orcutt's brodiaea	Brodiaea orcuttii	CSP CNPS: List 1B	Perennial bulbiferous herb. Occurs in closed-cone coniferous forest; chaparral; cismontane woodland; meadows and seeps; valley and foothill grasslands; and mesic, clay, and sometimes serpentine vernal pools. From 90 to 5,076 ft in elevation.	May-July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Santa Rosa basalt brodiaea	Brodiaea santarosae	CSP CNPS: List 3	Perennial bulbiferous herb. Occurs in basaltic valley and foothill grasslands from 1,740 to 3,135 ft in elevation.	May–June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Intermediate mariposa lily	Calochortus weedii var. intermedius	CSP CNPS: List 1B	Perennial bulbiferous herb. Occurs in chaparral, coastal scrub, and valley and foothill grasslands. Often in dry, rocky soils from 395 to 2,805 ft in elevation.	May–July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Southern tarplant	Centromadia parryi ssp. australis	CSP CNPS: List 1B	Annual herb. Occurs in vernal pools, margins of marshes and swamps, and vernally mesic valley and foothill grasslands, sometimes with saltgrass on alkaline soils. Up to 1,400 ft in elevation.	May– November	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Smooth tarplant	Centromadia pungens ssp. laevis	CSP CNPS: List 1B	Annual herb. Occurs in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grasslands, usually in alkaline soils. From 0 to 1,920 ft in elevation.	April– September	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Orcutt's pincushion	Chaenactis glabriuscula var. orcuttiana	CSP CNPS: List 1B	Annual herb. Occurs in coastal bluff scrub and coastal dunes from 9 to 300 ft in elevation.	January– August	Α	No suitable habitat for this species is present in the BSA.

2.17-4

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Long-spined spineflower	Chorizanthe polygonoides var. longispina	CSP CNPS: List 1B	Annual herb. Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools, often with clay. From 90 to 4,590 ft in elevation.	April–July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Summer holly	Comarostaphylis diversifolia ssp. diversifolia	CSP CNPS: List 1B	Perennial evergreen shrub. Occurs in chaparral and cismontane woodland from 90 to 1,650 ft in elevation.	April–June	А	No suitable habitat for this species is present in the BSA.
Sea dahlia	Coreopsis maritima	CSP CNPS: List 2	Perennial herb. Occurs in coastal bluff scrub and coastal scrub from 15 to 450 ft in elevation.	March-May	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Blochman's dudleya	Dudleya blochmaniae ssp. blochmaniae	CSP CNPS: List 1B	Perennial herb. Occurs in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grasslands, often in rocky, clayey, or serpentine soils. From 15 to 1,350 ft in elevation.	April–June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Many- stemmed dudleya	Dudleya multicaulis	CSP CNPS: List 1B	Perennial herb. Occurs in chaparral, coastal scrub, and valley and foothill grasslands, usually in heavy, often clayey soils. From 45 to 2,370 ft in elevation.	April–July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Sticky dudleya	Dudleya viscida	CSP CNPS: List 1B	Perennial herb. Occurs in chaparral, coastal bluff scrub, cismontane woodland, and rocky coastal scrub from 30 to 1,650 ft in elevation.	May-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Pendleton button-celery	Eryngium pendletonensis	CSP CNPS: List 1B	Perennial herb. Occurs in coastal bluff scrub; valley and foothill grasslands; and clay, vernally mesic vernal pools from 45 to 330 ft in elevation.	April–June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Sand-loving wallflower	Erysimum ammophilum	CSP CNPS: List 1B	Perennial herb. Occurs in maritime chaparral, coastal dunes, and sandy openings in coastal scrub from 0 to 200 ft in elevation.	February– June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Cliff spurge	Euphorbia misera	CSP CNPS: List 2	Perennial shrub. Occurs in coastal bluff scrub, coastal scrub, and Mojavean desert scrub in rocky soils or along cliffs. From 30 to 1,500 ft in elevation.	December– August	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Palmer's grapplinghook	Harpagonella palmeri	CSP CNPS: List 4	Annual herb. Occurs in chaparral, coastal scrub, and valley and foothill grasslands, often in clay soil. From 60 to 2,865 ft in elevation.	March-May	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

2.17-6

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Vernal barley	Hordeum intercedens	CSP CNPS: List 3	Annual herb. Occurs in coastal dunes, coastal scrub, vernal pools, and valley and foothill grasslands from 15 to 3,000 ft in elevation.	March-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Ramona horkelia	Horkelia truncata	CSP CNPS: List 1B	Perennial herb. Occurs in chaparral and cismontane woodland, in clay and gabbroic soils. From 1,200 to 3,900 ft in elevation.	May-June	А	No suitable habitat for this species is present in the BSA.
California satintail	Imperata brevifolia	CSP CNPS: List 2	Perennial rhizomatous herb. Occurs in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub in mesic soils. From 0 to 1,500 ft in elevation.	September- May	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Coulter's goldfields	Lasthenia glabrata ssp. coulteri	CSP CNPS: List 1B	Annual herb. Occurs in marshes and swamps, playas, and vernal pools from 3 to 3,660 ft in elevation.	February– June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Nuttall's lotus	Lotus nuttallianus	CSP CNPS: List 1B	Annual herb. Occurs in coastal dunes and coastal scrub in sandy soils. From 0 to 30 ft in elevation.	March-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Santa Catalina Island desert- thorn	Lycium brevipes var. hassei	CSP CNPS: List 1B	Perennial deciduous herb. Occurs in coastal scrub and coastal bluff scrub from 30 to 900 ft in elevation.	June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Little mousetail	Myosurus minimus ssp. apus	CSP CNPS: List 3	Annual herb. Occurs in valley and foothill grasslands and vernal pools from 60 to 1,920 ft in elevation.	March-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Prostrate vernal pool navarretia	Navarretia prostrata	CSP CNPS: List 1B	Annual herb. Occurs in coastal scrub, meadows and seeps, alkaline valley and foothill grasslands, and mesic vernal pools from 45 to 2,100 ft in elevation.	April–July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Coast woolly- heads	Nemacaulis denedata var. denudata	CSP CNPS: List 1B	Annual herb. Occurs in coastal dunes from 0 to 300 ft in elevation.	April– September	А	No suitable habitat for this species is present in the BSA.
Slender cottonheads	Nemacaulis denudata var. gracilis	CSP CNPS: List 2	Annual herb. Occurs in coastal dunes, desert dunes, and Sonoran desert scrub from 150 to 1,200 ft in elevation.	(March) April- May	А	No suitable habitat for this species is present in the BSA.
Peninsular nolina	Nolina cismontana	CSP CNPS: List 1B	Perennial evergreen shrub. Occurs in chaparral and coastal scrub on sandstone or gabbro soils. From 420 to 3,825 ft in elevation.	May–July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

2.17-8

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Allen's pentachaeta	Pentachaeta aurea ssp. allenii	CSP CNPS: List 1B	Annual herb. Occurs in coastal scrub openings and valley and foothill grasslands from 225 to 1,560 ft in elevation.	March-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
White rabbit- tobacco	Pseudognaphalium leucocephalum	CSP CNPS: List 2	Perennial herb. Occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodland on sandy and gravelly soils below 7,000 ft in elevation.	August– November (July– December) ¹	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Nuttall's scrub oak	Quercus dumosa	CSP CNPS: List 1B	Perennial evergreen shrub. Occurs in closed-cone coniferous forest, chaparral, and coastal scrub in sandy, clay loam soils. From 45 to 1,200 ft in elevation.	February– April	НР	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
San Miguel savory	Satureja chandleri	CSP CNPS: List 1B	Perennial shrub. Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grasslands, usually in rocky, gabbroic, or metavolcanic soils. From 360 to 3,225 ft in elevation.	March-July	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Chaparral ragwort	Senecio aphanactis	CSP CNPS: List 2	Annual herb. Occurs in chaparral, cismontane woodland, and coastal scrub on drying alkaline flats. From 45 to 2,400 ft in elevation.	January-April	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.

Table 2.17-1 Listed, Proposed, and Special-Status Plant Species and Critical Habitat Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Habitat Present/ Absent	Rationale
Salt spring checkerbloom	Sidalcea neomexicana	CSP CNPS: List 2	Perennial herb. Occurs in coastal scrub, chaparral, lower montane coniferous forest, brackish marshes, Mojavean desert scrub, and playas on alkaline, mesic soils. From 45 to 4,590 ft in elevation.	March-June	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
Estuary seablite	Suaeda esteroa	CSP CNPS: List 1B	Perennial herb. Occurs in coastal salt marshes and swamps up to 15 ft in elevation.	May-October (January) ¹	А	No suitable habitat for this species is present in the BSA.
Parry's tetracoccus	Tetracoccus dioicus	CSP CNPS: List 1B	Perennial deciduous herb. Occurs on dry, stony slopes in chaparral and coastal sage scrub. From 500 to 2,200 ft in elevation.	April-May	HP	Suitable habitat for this species is present in the BSA. Not observed during botanical surveys conducted during the appropriate blooming period for this plant in 2010.
La Purisima viguiera	Viguiera purisimae	CSP CNPS: List 2	Shrub. Occurs in coastal bluff scrub and chaparral from 1,095 to 1,275 ft in elevation.	April– September	А	No suitable habitat for this species is present in the BSA.

¹ Flowering during months in parentheses is uncommon.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC); California Endangered (CE); California Threatened (CT); California Fully Protected Species (CFP); California Special Plant (CSP), California Native Plant Society (CNPS); etc.

Habitat Present/Absent:

A-No habitat is present and no further work is needed, or habitat is absent or species was absent in the BSA at the time of the focused survey.

HP – Habitat is or may be present.

O – The species was observed in the BSA at the time of the survey.

CH – The project footprint is located in a designated critical habitat unit, but appropriate habitat is not necessarily present.

BSA = Biological Study Area

ft = feet

CNPS designations:

List 1A: Plants presumed extinct in California

List 1B: Plants rare and endangered in California and throughout their range List 2: Plants rare, threatened, or endangered in California but more common

elsewhere in their range

List 3: Plants needing more information (a review list)

List 4: Plants of limited distribution (a watch list)

these species were negative. Therefore, these species are considered absent from the BSA.

2.17.2.3 Special-Status Grassland and Disturbed Area Plant Species

Special-status plant species with the potential to occur in grassland habitats and disturbed areas in the BSA are Coulter's saltbush (CNPS List 1B), south coast saltscale (CNPS List 1B), Orcutt's brodiaea (CNPS List 1B), intermediate mariposa lily (CNPS List 1B), southern tarplant (CNPS List 1B), smooth tarplant (CNPS List 1B), long-spined spineflower (CNPS List 1B), Blochman's dudleya (CNPS List 1B), many-stemmed dudleya (CNPS List 1B), Pendleton button-celery (CNPS List 1B), Palmer's grapplinghook (CNPS List 4), vernal barley (CNPS List 4), California satintail (CNPS List 2), Coulter's goldfields (CNPS List 1B), little mousetail (CNPS List 3), prostrate vernal pool navarretia (CNPS List 1B), Allen's pentachaeta (CNPS List 1B), and San Miguel savory (CNPS List 1B). There is suitable habitat in the BSA that could support these species; however, much of this habitat is disturbed, developed, or degraded by infestations of nonnative species. Although some of these plant species flourish in disturbed habitats, none of these species were found in the BSA during the botanical surveys conducted during the appropriate blooming periods in 2010. Therefore, these species are considered absent from the BSA.

2.17.3 Environmental Consequences

2.17.3.1 Temporary Impacts

Build Alternative 4 with Design Option A (Preferred Alternative)

Botanical surveys to establish the presence/absence of these species in the BSA were conducted during the appropriate blooming period in 2010. The project is not expected to affect any of these species because they are considered absent from the BSA.

2.17.3.2 Permanent Impacts

Build Alternative 4 with Design Option A (Preferred Alternative)

Botanical surveys to establish the presence/absence of these species in the BSA were conducted during the appropriate blooming period in 2010. The project is not expected to affect any of these species because they are considered absent from the BSA.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are warranted because these species are considered absent from the BSA.

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